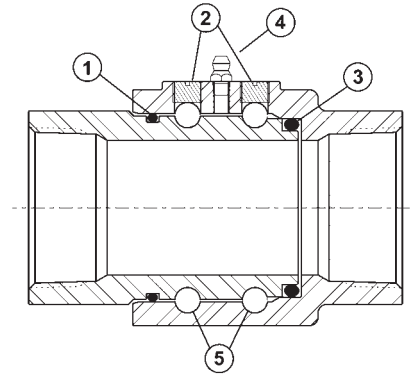


## O-Ring Swivel Joints

### O-Ring Parts Identification List

- 1. O-ring (dust) seal
- 2. ball retainer screw
- 3. O-ring (pressure) seal
- 4. grease fitting
- 5. ball bearings



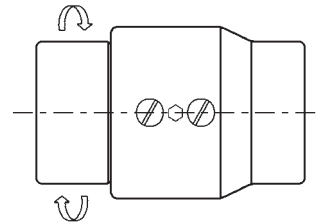
**O-Ring Features:**

- The O-ring pressure seal ensures a leak-proof seal at either high or low pressure and smoother rotation at lower torques than multiple seal designs.
- Spring-loaded PTFE pressure seals are available up through 3".
- Carbon steel and stainless steel O-ring type swivels provide greater strength and the corrosion resistance needed for lower torque applications.
- available in carbon steel, stainless steel, aluminum, brass and iron
- **100% full penetration welding available**

### Single Plane O-Ring Style 20



320FXFAL

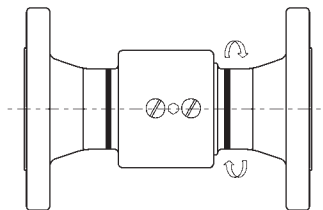


female NPT x female NPT  
sizes 1" - 4"

**female NPT x female NPT  
Buna-N seals  
carbon steel ball bearings**

Size	Aluminum		Malleable Iron	
	Part #	Price/E	Part #	Price/E
1½"	<b>15020FXFAL00000</b>	<b>\$270.70</b>	<b>15020FXFMI00000</b>	<b>\$342.60</b>
2"	<b>220FXFAL00000</b>	<b>376.15</b>	<b>220FXFMI00000</b>	<b>472.95</b>
3"	<b>320FXFAL00000</b>	<b>435.85</b>	<b>320FXFMI00000</b>	<b>701.10</b>
4"	<b>420FXFAL00000</b>	<b>649.90</b>	---	---

- contact Dixon for additional sizes, materials and configurations

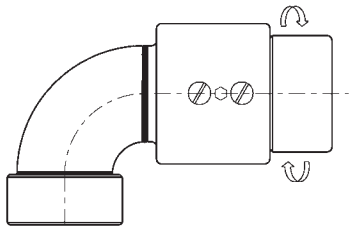


150# ASA flange x 150# ASA flange  
sizes 1" - 4"

See page 765 for other options available.

## O-Ring Swivel Joints

### Single Plane O-Ring Style 30



female NPT x female NPT  
sizes 1" - 4"

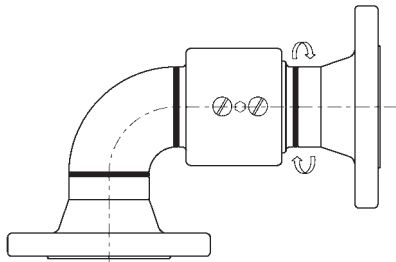


230FXFAL

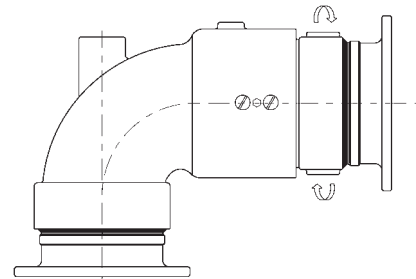
**female NPT x female NPT**  
**Buna-N seals**  
**carbon steel ball bearings**

Size	Aluminum		Malleable Iron	
	Part #	Price/E	Part #	Price/E
1½"	<b>15030FXFAL00000</b>	<b>295.20</b>	<b>15030FXFMI00000</b>	<b>\$374.05</b>
2"	<b>230FXFAL00000</b>	<b>384.15</b>	<b>230FXFMI00000</b>	<b>519.70</b>
3"	<b>330FXFAL00000</b>	<b>519.70</b>	<b>330FXFMI00000</b>	<b>777.55</b>
4"	<b>430FXFAL00000</b>	<b>697.85</b>	---	---

• contact Dixon for additional sizes, materials and configurations



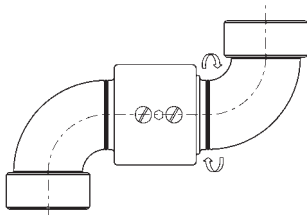
150# ASA flange x 150# ASA flange  
sizes 1" - 4"



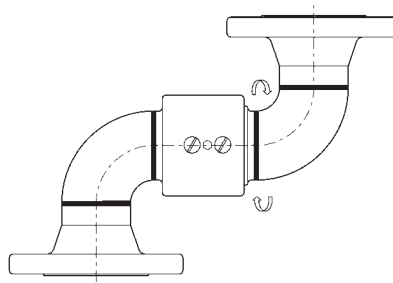
tank truck flange x tank truck flange  
sizes 2" - 4"

See page 765 for other options available.

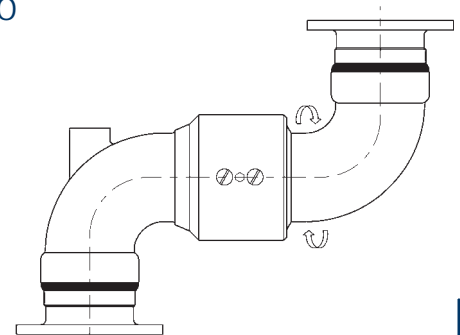
### Single Plane O-Ring Style 40



female NPT x female NPT  
sizes 1" - 4"

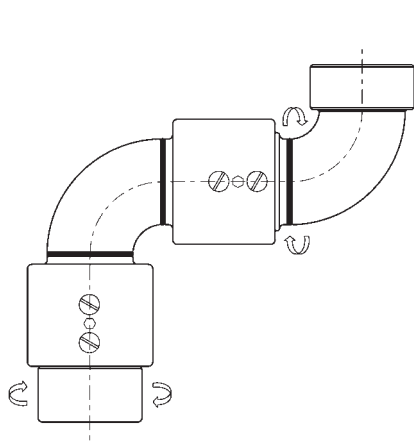


150# ASA flange x 150# ASA flange  
sizes 1" - 4"

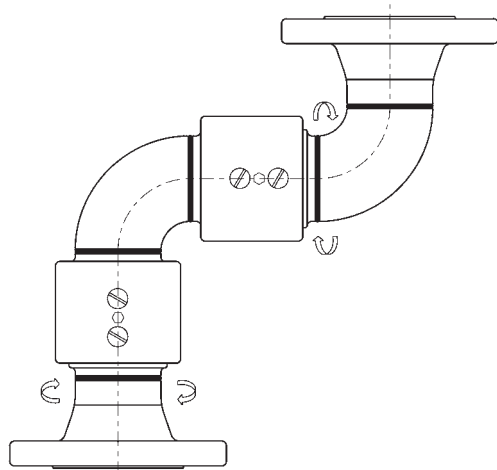


tank truck flange x tank truck flange  
sizes 2" - 4"

### Double Plane O-Ring Style 50

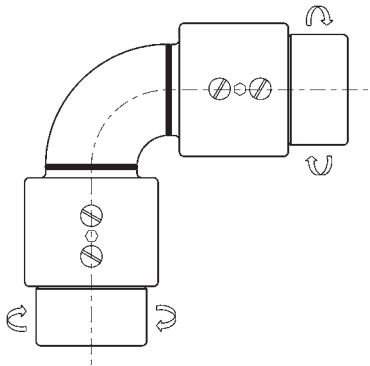


female NPT x female NPT  
sizes 1" - 4"

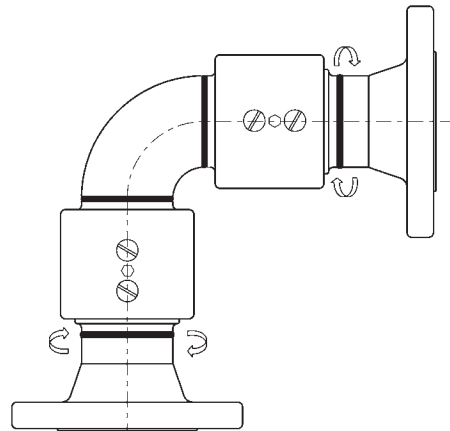


150# ASA flange x 150# ASA flange  
sizes 1" - 4"

### Double Plane O-Ring Style 60

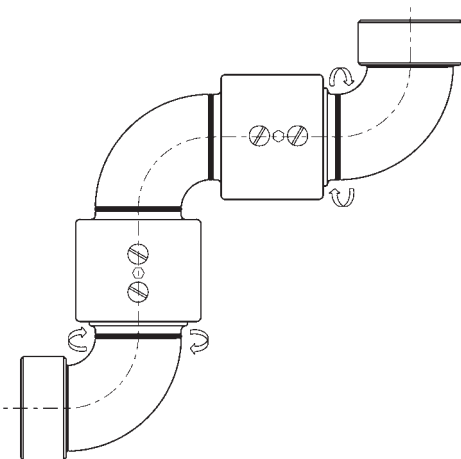


female NPT x female NPT  
sizes 1" - 4"

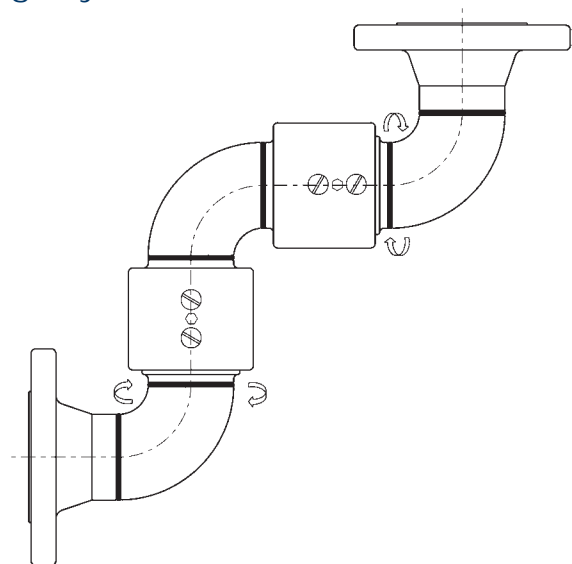


150# ASA flange x 150# ASA flange  
sizes 1" - 4"

### Triple Plane O-Ring Style 70



female NPT x female NPT  
sizes 1" - 4"

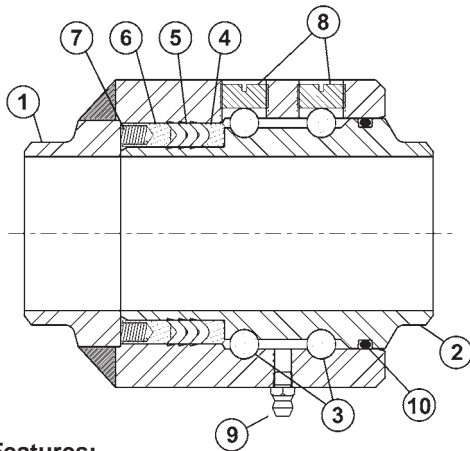


150# ASA flange x 150# ASA flange  
sizes 1" - 4"

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# V-Ring Swivel Joints

## V-Ring Parts Identification List

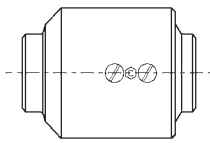


1. body
2. sleeve
3. ball bearings
4. seal retainer
5. V-ring (pressure) seal
6. spring retainer
7. spring
8. ball retainer screw
9. grease fitting
10. O-ring (dust) seal

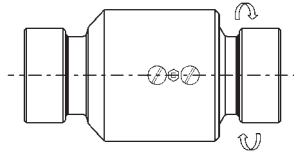
### V-Ring Features:

- The spring-loaded triple V-ring sealing system ensures a leak proof seal at either high or low pressure and an extended seal life compared to the conventional single O-ring design.
- The 3" - 8" carbon steel swivels are manufactured from carbon steel with laser hardened dual raceways for greater load bearing capacity and longer life.
- The stainless steel swivels are manufactured in 316 grade stainless steel for superior corrosion resistance.
- available with pressure ratings to 1,000 PSI
- available in carbon steel, stainless steel and aluminum
- **100% full penetration welding available**

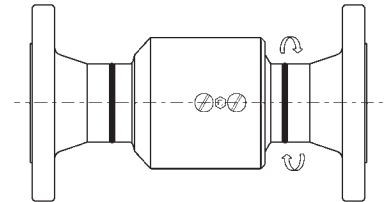
### Single Plane V-Ring Style 20



weld end x weld end  
sizes 2" - 8"

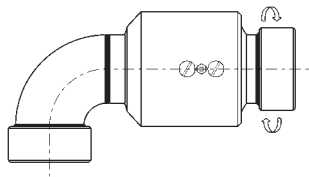


female NPT x female NPT  
sizes 2" - 6"

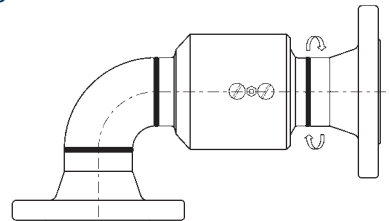


150# ASA flange x 150# ASA flange  
sizes 2" - 8"

### Single Plane V-Ring Style 30

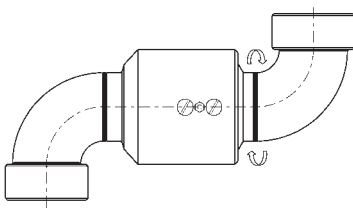


female NPT x female NPT  
sizes 2" - 6"

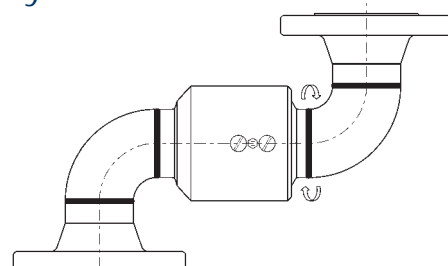


150# ASA flange x 150# ASA flange  
sizes 2" - 8"

### Single Plane V-Ring Style 40

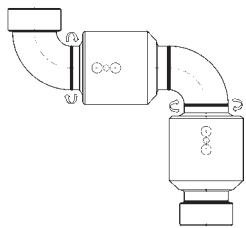


female NPT x female NPT  
sizes 2" - 6"

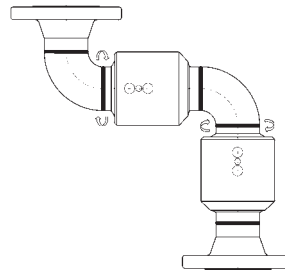


150# ASA flange x 150# ASA flange  
sizes 2" - 8"

### Double Plane V-Ring Style 50

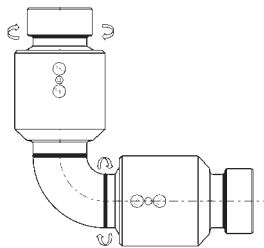


female NPT x female NPT  
sizes 2" - 6"

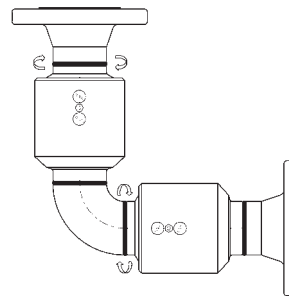


150# ASA flange x 150# ASA flange  
sizes 2" - 8"

### Double Plane V-Ring Style 60

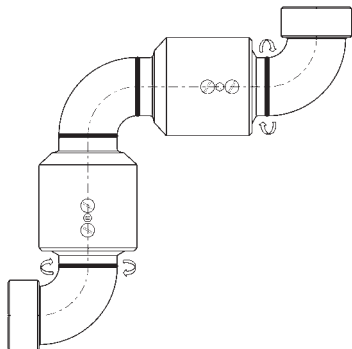


female NPT x female NPT  
sizes 2" - 6"

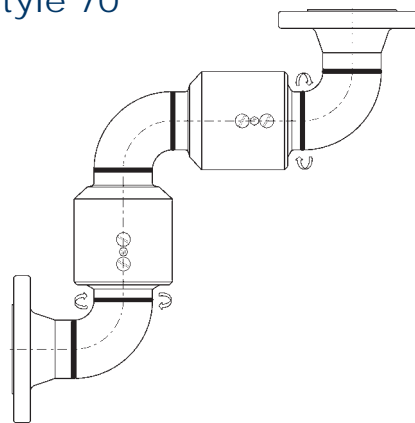


150# ASA flange x 150# ASA flange  
sizes 2" - 8"

### Double Plane V-Ring Style 70

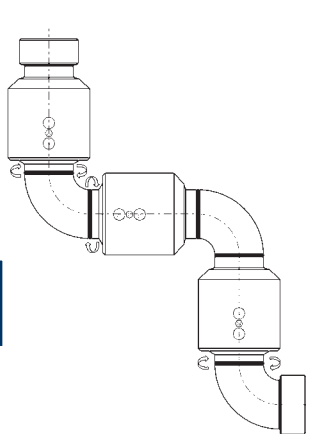


female NPT x female NPT  
sizes 2" - 6"

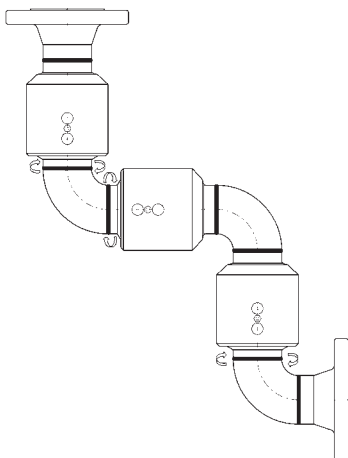


150# ASA flange x 150# ASA flange  
sizes 2" - 8"

### Triple Plane V-Ring Style 80

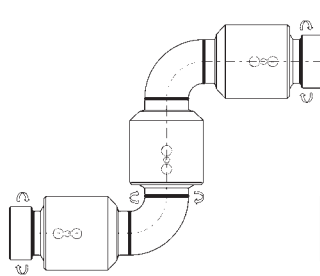


female NPT x female NPT  
sizes 2" - 6"

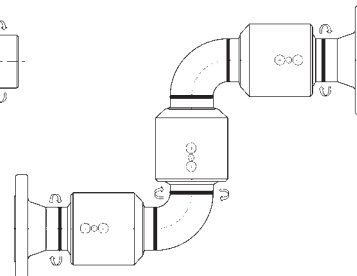


150# ASA flange x 150# ASA flange  
sizes 2" - 8"

### Triple Plane V-Ring Style 10



female NPT x female NPT  
sizes 2" - 6"



150# ASA flange x 150# ASA flange  
sizes 2" - 8"

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## Ordering Information - Swivels

To select the proper swivel joint you need the following information:

Size: \_\_\_\_\_ Style (shape): \_\_\_\_\_

End Configuration: \_\_\_\_\_ Material: \_\_\_\_\_

Maximum Working Pressure: \_\_\_\_\_ Temperature Range: \_\_\_\_\_

Product being handled: (if a chemical, please advise concentration) \_\_\_\_\_

If for constant rotation, advise RPM: \_\_\_\_\_

If for suction service, advise maximum vacuum in inches of Mercury (Hg): \_\_\_\_\_

Our factory sales and engineering staff will be happy to help you evaluate your swivel application. Please call 800.355.1991.

### Part Number Configuration

	<i>swivel size</i>	<i>swivel style</i>	<i>end configuration</i>	<i>end configuration</i>	<i>swivel material</i>	<i>pressure seal (Buna-N standard)</i>	<i>dust seal (Buna-N standard)</i>	<i>retainers (V-Ring ONLY)</i>	<i>ball bearings (carbon steel standard)</i>	<i>grease</i>	
<b>Example</b>	<u>2</u>	<u>20</u>	<u>F</u>	X	<u>F</u>	<u>CS</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>
	[A]	[B]	[C]		[C]	[D]	[E]	[F]	[G]	[H]	[I]

[A] Size

[B] Style (see diagrams)

[C] End Connections	<b>W</b> Weld End	<b>F</b> Female End	<b>FG</b> 150# ASA Flange	<b>TF</b> Tank Truck Flange	<b>PF</b> 300# ASA flange (not available on aluminum)
[D] Material	<b>CS (V-Ring)</b> carbon steel	<b>SS (V-Ring)</b> stainless steel	<b>AL</b> aluminum	<b>BR</b> brass	<b>MI</b> malleable iron
	<b>OC (O-Ring)</b> carbon steel	<b>OS (O-Ring)</b> stainless steel			

Code #	[E] Pressure Seal	[F] Dust Seal	[G] Retainers	[H] Ball Bearings	[I] Grease
0	Buna-N (standard)	Buna-N (standard)	No retainers (O-ring swivels)	Carbon steel (standard)	Standard
1	FKM	FKM	Aluminum (standard in CS V-ring)	440 grade stainless	FDA approved/ Food grade
2	PTFE	---	PTFE (standard in SS V-ring)	316 grade stainless	Silicone (required with EPR seals)
3	Ethylene Propylene (requires silicone grease)	Ethylene Propylene (requires silicone grease)	---	---	---
4	FDA Buna (O-ring only)	FDA Buna	---	---	---

The swivel should be packed so that the surfaces coming in contact with the fluid being handled are compatible with that fluid. In the case of the use of the swivel in submerged service this would include the dust seals and ball bearings.

Dixon always recommends the use of stainless steel ball bearings when building a swivel for submerged service since the standard carbon steel bearings could rust together making it impossible to disassemble the swivel and possibly affecting its operation.

## TTMA Flanged Breakaway Coupling



### Features:

- minimizes spillage and damage associated with drive away and pull away incidents
- installs between an API coupler and loading arm
- coupling automatically senses excessive load, closes the valves and disconnects
- high flow rate / low pressure drop
- **230 PSI** at ambient temperature (70°F)
- FKM/FPM is standard seal

Size	Aluminum	
	Part #	Price/E
4"	<b>SBC400ALTTMA</b>	<b>\$5267.00</b>

## TTMA Series Flange Adapters

### Features:

- simply and easily converts threaded components to a standard TTMA flange configuration
- solid cast lightweight aluminum design is more durable than welded fabrications
- design improves flow through adapter
- compact size reduces the overall space needed to install
- for flange drilling standards, see page 822

### Male Threaded

#### TTMA flange x standard male NPT



TTMA Flange	Male NPT	Overall Length	Aluminum	
			Part #	Price/E
3"	3"	2½"	<b>TTF3AL-3MT</b>	<b>\$87.50</b>
4"	3"	2½"	<b>TTF4AL-3MT</b>	<b>65.90</b>
4"	4"	2½"	<b>TTF4AL-4MT</b>	<b>61.10</b>

### Extended Length - Male Threaded

#### TTMA flange x extended length male NPT



TTMA Flange	Male NPT	Overall Length	Aluminum	
			Part #	Price/E
4"	3"	5½"	<b>TTF4AL-3EMT</b>	<b>\$87.50</b>
4"	4"	5½"	<b>TTF4AL-4EMT</b>	<b>102.15</b>

### Female Threaded

#### TTMA flange x female NPT



TTMA Flange	Female NPT	Overall Length	Aluminum	
			Part #	Price/E
4"	3"	2½"	<b>TTF4AL-3FT</b>	<b>\$78.35</b>
4"	4"	2½"	<b>TTF4AL-4FT</b>	<b>78.05</b>

### Slip-on

#### TTMA flange x socket weld



TTMA Flange	Pipe Size	Aluminum	
		Part #	Price/E
4"	4"	<b>TTF400SP</b>	<b>\$67.00</b>

## Round Tank Truck Flange Gaskets (TTMA)



Size	OD	ID	THK	Material	Part #	Price/E
3"	5-5/8"	3-1/2"	1/8"	Cork / Buna	<b>300GTTFCB</b>	<b>\$3.90</b>
3"	5-5/8"	3-1/2"	1/16"	PTFE envelope with Klinger filler	<b>300GTTFTK</b>	<b>17.25</b>
3"	5-5/8"	3-1/2"	1/8"	Klingersil® C-4401	<b>300GTTFK</b>	<b>9.95</b>
3"	5-7/8"	3-1/2"	1/4"	PTFE with fiber core	<b>40321TF</b>	<b>22.65</b>
4"	6-5/8"	4-9/16"	1/8"	Cork / Buna	<b>400GTTFCB</b>	<b>4.60</b>
4"	6-5/8"	4-9/16"	1/16"	PTFE envelope with Klinger filler	<b>400GTTFTK</b>	<b>23.00</b>
4"	6-5/8"	4-9/16"	1/8"	Klingersil® C-4401	<b>400GTTFK</b>	<b>18.25</b>
4"	6-7/8"	4-9/16"	1/4"	PTFE with fiber core	<b>40322TF</b>	<b>34.00</b>

## API Couplers

### Features:

- completely modular, coupler can be built with various face seal combinations for compatibility with different alternative fuel / performance levels and applications
- 4" TTMA inlet mounting flange
- 5 cam design for easy alignment and tight connection
- ball-end handle for easy, comfortable operation
- no special tools needed for maintenance
- shaft seals can be changed without removing coupler from loading arm
- link, shaft, pin and crank: hardened 17-4PH stainless steel
- cam: stainless steel
- weight: 20 lbs.
- maximum operating pressure: **150 PSI**
- peak surge pressure: 350 PSI
- temperature range: **-20°F to 400°F** (FKM-B seals)
- maximum flow rate: 600 GPM
- pressure drop: 3 to 4 PSI
- replacement parts are available, contact Dixon

### API coupler with bonded nose seal

Seal Material	Part #	Price/E
Buna	<b>5300</b>	<b>\$2343.25</b>
FKM-B	<b>5300B</b>	<b>2577.60</b>
FKM-B GFLT	<b>5300G</b>	<b>2694.50</b>
FKM-B with stainless wave spring	<b>5300BC</b> <b>NEW</b>	<b>2580.00</b>

### API coupler with replaceable nose seal

Seal Material	Part #	Price/E
Buna	<b>5400</b>	<b>\$2434.95</b>
FKM-B	<b>5400B</b>	<b>2678.45</b>
FKM-B GFLT	<b>5400G</b>	<b>2799.55</b>



## API Valves

### Application:

- Used for bottom loading and unloading of petroleum tankers, typically mounted to the piping below each tank compartment using the built-in 4" TTMA flange connection.

Description	Part #	Price/E
load/unload API valve with sight glass, ALH nose ring	<b>5204</b>	<b>\$777.65</b>
load only API valve without sight glass, ALH nose ring	<b>5204LNG</b>	<b>547.50</b>
load/unload API valve, without sight glass, fixed handle, Baylast™ seal	<b>5204NG</b>	<b>777.65</b>
load only API valve without sight glass, Baylast™ seal, stainless steel springs	<b>5204LSNG</b> <b>NEW</b>	<b>643.75</b>
load only API valve without sight glass, Baylast™ seal, stainless steel springs with ½" FNPT drain port	<b>5204LSNGP</b> <b>NEW</b>	<b>721.00</b>



5204NG



5204LNG

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## API Compatible Rack Cords

### Features:

- highly visible safety orange jacket to meet trip hazard requirements
- cord is bonded mechanically and resistant to abrasion and oil
- Cord sets are interchangeable with Scully and Civacon. All wiring is compatible with standard Scully color codes and wiring number configurations. The 9 pin conductor is shielded to be compatible with Scully VIP system.
- plug body is reinforced nylon and is color coded Optic Blue or Thermistor Green
- button contacts are 316 stainless steel to prevent corrosion
- all other hardware is stainless steel



### Model FT600

#### API Thermistor Assemblies

Description	Part #	Price/E
plug with 30' coiled cable	<b>FT600</b>	<b>\$1099.15</b>
plug with 30' coiled cord for Canada	<b>FT600C</b>	<b>1099.15</b>
plug with 20' straight cable	<b>FT600S</b>	<b>1045.95</b>
plug with 20' straight cord for Canada	<b>FT600SC</b>	<b>1045.95</b>

#### replacement parts and accessories

Description	Part #	Price/E
replacement plug body	<b>FT601</b>	<b>\$568.00</b>
replacement plug body for Canada	<b>FT601-10</b>	<b>568.00</b>
replacement 30' coiled cable	<b>FT602</b>	<b>463.55</b>
plug hanger	<b>FT603</b>	<b>330.50</b>

### Model FT620

#### API Optic Assemblies

Description	Part #	Price/E
plug with 30' coiled cable	<b>FT620</b>	<b>\$1099.15</b>
plug with 20' straight cable	<b>FT620S</b>	<b>1045.95</b>

#### replacement parts and accessories

Description	Part #	Price/E
replacement plug body	<b>FT621</b>	<b>\$585.05</b>
replacement 30' coiled cable	<b>FT622</b>	<b>477.55</b>
plug hanger	<b>FT623</b>	<b>340.45</b>

NEW 2014

## Reelcraft® Static Discharge Reels

### Applications:

- Used to ground equipment in hazardous atmospheres, such as fuel trucks or carts transferring flammable materials. When properly clamped to ground, the static discharge reel dissipates static electrical buildup, reduced the chances of sparking and the potential for explosion.

### Features:


- supplied with a 3/32" OD steel aircraft cable
- DC resistance is approximately one ohm per 50' of steel cable



Description	Part #	Price/E
single 7" x 7" stranded steel	<b>G3050</b>	<b>\$675.00</b>

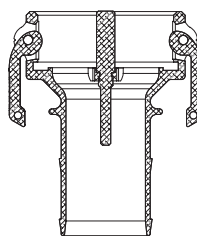
## Dixon Vapor Recovery Couplers

## Features:

- Not intended for liquid service, for vapor recovery *only*. 
- bronze arms with stainless steel pins
- plated carbon steel finger rings
- Buna-N gasket

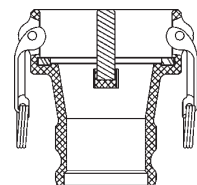
## coupler with probe x hose shank

Coupler Size	Hose Shank Size	Aluminum	
		Part #	Price/E
4"	3"	<b>4030-CVR-AL</b>	\$129.10
4"	4"	<b>400-CVR-AL</b>	137.00



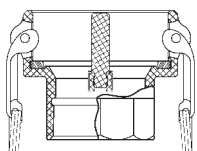
## coupler with probe x adapter

Coupler Size	Adapter Size	Aluminum	
		Part #	Price/E
4"	3"	<b>4030-DAVR-AL</b>	\$139.50



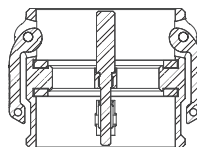
## coupler with probe x female NPT

Coupler Size	Female NPT Size	Aluminum	
		Part #	Price/E
4"	3"	<b>4030-DVR-AL</b>	\$155.00
4"	4"	<b>400-DVR-AL</b>	157.30




## coupler with probe x coupler with probe

Coupler Size	Coupler Size	Aluminum	
		Part #	Price/E
4"	4"	<b>400-DDVR-AL</b>	\$160.00



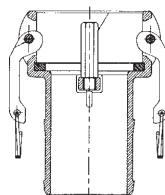
## Dixon Bayco Vapor Recovery Couplers

## Features:

- not intended for liquid service, for vapor recovery *only*. 
- for use with 3" vapor hose
- cast aluminum body, bronze arms with stainless steel pins and finger rings
- Buna-N gasket
- The VR4030CS-AL has a FKM O-ring poppet seal.

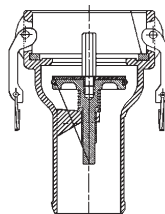
## coupler with probe x hose shank


Coupler Size	Hose Shank Size	Aluminum	
		Part #	Price/E
3"	3"	<b>VRC3000AL</b>	\$144.05



## coupler with poppet and probe x hose shank

Coupler Size	Hose Shank Size	Aluminum	
		Part #	Price/E
4"	3"	<b>VR4030CS-AL<sup>1</sup></b>	\$213.25



<sup>1</sup> The VR4030CS-AL will interchange with all competitor vapor valves *except* Civacon #633LVH (special bulb design). 

## coupler with "floating bridge" poppet x hose shank

Coupler Size	Hose Shank Size	Aluminum	
		Part #	Price/E
4"	4"	<b>VR4040CS-AL</b>	\$412.00



## repair kits

Description	Part #	Price/E
seal repair kit: gasket, machine screw and FKM O-ring	<b>VR4040CSRK1</b>	\$21.35
cam arm repair kit: paddle arm and cam arm pin	<b>VR4040CSRK2</b>	82.15

## TTMA Flange Extensions



TETF4AL



TETFG4AL

**Application:**

- Used on load arms to connect an API load coupler to the load arm, provides a specified parting point to prevent excessive damage to the loading arm.

**Feature:**

- adds a 6" space between the load arm and the tank truck

Size	Description	Aluminum	
		Part #	Price/E
4"	TTMA flange extension	<b>TETF4AL</b>	<b>\$130.00</b>
4"	TTMA flange extension with groove	<b>TETFG4AL</b>	<b>133.50</b>

## Type 35 Loading Arm Swivel



style 40



style 30

**Features:**

- TTMA loading arm swivel with D style shovel handle
- TTMA flanges on both ends
- shovel handle is used to guide the API load coupler onto the adapter on the tank truck
- long radius elbow improves the flow into the API load coupler and provides spacing between the load arm and the tank truck
- can be used with flange extensions above

Size	Description	Aluminum	
		Part #	Price/E
4"	style 40 tank truck x Buna tank truck flange	<b>44HTFXTFAL00000</b>	<b>\$1400.00</b>
4"	style 40 tank truck x FKM tank truck flange	<b>44HTFXTFAL11000</b>	<b>1400.00</b>
4"	style 30 tank truck x Buna tank truck flange	<b>43HTFXTFAL00000</b>	<b>1200.00</b>
4"	style 30 tank truck x FKM tank truck flange	<b>43HTFXTFAL11000</b>	<b>1200.00</b>

## Type 35 Loading Arm Swivel Replacement Parts

Description	Part #	Price/E
4" aluminum nipple	<b>ATN100x7</b>	<b>\$25.00</b>
D style shovel handle	<b>100DHAN-AL</b>	<b>35.00</b>
Buna repair kit	<b>4RKOBU</b>	<b>38.90</b>
FKM repair kit	<b>4RKOVIVI</b>	<b>60.65</b>